

THE ANNALS
AND
MAGAZINE OF NATURAL HISTORY.
[SIXTH SERIES.]

No. 2. FEBRUARY 1888.

IX.—*On some new Species of the Genus Spongodes, Less., from the Philippine Islands and the Japanese Seas.* By Dr. TH. STUDER, Berne.

THE following new species form part of a collection of Alcyonaria collected by Dr. Doederlein in the Japanese seas, also a specimen from the Philippine Islands kindly communicated to me by Professor Semper, of Würzburg.

I am greatly indebted to these gentlemen for having communicated their materials to me for description.

Spongodes Semperi, n. sp.

A thick, cylindrical, barren trunk, the base of which is fixed in the sand by means of stolons; from its upper end, which is bounded by a circular fold covered on the margin with polyps, it gives off a number of conical branches. These together form a rounded head, the middle branches being higher than the lower ones. Each branch is covered with relatively large polyp-heads, each of which is surmounted by a bundle of spicules. These heads are arranged on the branches in close spirals, the branches thus acquiring the form of spikes. The colony is rigid; the wall of the trunk is incrustated with large spindle-shaped spicules.

Colour in spirit greyish white.

Locality. Philippine Islands. Collected by Prof. Semper.
Ann. & Mag. N. Hist. Ser. 6. Vol. i.

Spongodes glomerata, n. sp.

The colony forms a low bush, which appears to be divided into several spherical lobes. It is of a whitish colour, with reddish polyp-heads. Height 12 millim., breadth 45 millim. The short stem divides shortly above the base into diverging branches, which are covered from the commencement with polyp-bearing lobules; these arise from a very rapid ramification of the twigs, which bear bundles of polyps at the ends. The lobules are spherical, from 6 to 9 millim in diameter, and contain up to twenty polyp-heads, each surmounted by a stout spicule 2 millim. long. The folded tentacles, armed with small spicules arranged *en chevron*, form an eight-lobed operculum. The consistence of the whole is soft and yielding.

The species is most nearly related to *S. Savignii* (Ehrbg.), which also it most resembles in external habit.

Locality. Japan. Collected by Dr. Doederlein.

Spongodes punicea, n. sp.

An upright branched colony, 50 millim. high and 40 millim. in diameter, with a short stem and a lobose head, crowded with polyps. Colour purplish red, with yellowish-white polyp-heads. The stem rises from an incrusting base; it has a thickness of 10 millim. and a height of 10 millim., and then divides into thick branches, which, after a short course, terminate in somewhat flattened twigs. Previous to the final ramification they give off also several small branchlets, which come off at right angles. The ramification of the terminal twigs, which latter are about 2 millim. thick, takes place in a corymbose manner, in which the three to six terminal twigs bear the polyp-heads laterally, the polyp-heads being surmounted by bundles of spicules. The terminal twigs diverging from separate lobes of 5 to 10 millim. in diameter, which bear from ten to twenty calices. The two large spicules at the base of the tentacles converge \wedge -like and form an operculum.

Locality. Japan. Collected by Dr. Doederlein.

Spongodes pumilio, n. sp.

The colony forms a low lobose mass, 25 millim. high and 85 millim. broad; of a whitish colour, with red polyp-heads, surmounted by silvery white bundles of spicules. A short trunk divides near its base into several thick branches, which are horizontally expanded. Each of these branches divides at the end into several divergent twigs, first, however, giving

off lateral twigs on two sides. The terminal twigs speedily divide into little twigs, which are arranged in a corymbose manner and bear bundles of polyps in which each calyx is surmounted by a spicule of from 2 to 2.5 millim. in length. The heads are red, the lateral bundles of spicules white. In each bundle of polyps one polyp appears to be more strongly developed than the others and projects above them.

Locality. Enoshima, Japan. Collected by Dr. Doederlein.

Spongodes rigida, n. sp.

The colony is a loosely ramified, shortly pedunculate, head-like mass of rigid consistence. The colour of the mass is dark purple, of the polyp-heads yellow. Height of the colony 33 millim., diameter 35 millim. The short cylindrical stalk divides at a height of 12 millim. into a number of branches coming off on all sides. The branches are directed in part horizontally outwards, in part obliquely upwards, and bear at the end divergent twigs, which divide in a corymbose manner into the polyp-bearing terminal twigs. Each of the latter bears a bundle of from three to five polyps, whose heads are supported by a spicule from 2 to 3 millim. in length. Each head possesses an eight-rayed operculum, composed of yellow spindles 0.25 millim. in length. Numerous spindles occur imbedded throughout the entire mesoderm, which thereby acquires a firm rigid condition.

Locality. Japan. Collected by Dr. Doederlein.

Spongodes coccinea, n. sp.

The colony forms an irregular lobose mass, placed on the end of a short barren stalk, which has a leathery consistence. The head is thickly covered with polyps and is of a dark carmine-red colour. Height of the colony 45 millim., diameter 45 millim., length of the stalk 17 millim.

The ramification takes place in such a fashion that the main stem divides into a few (four) large flat branches, speedily giving off along their course and from their ends smaller secondary branches, which divide into smaller secondary and terminal twigs. These bear bundles of from four to six polyp-heads. These terminal lobules are united with the others into larger groups, and these again into four lobes which correspond to the four main branches. The polyp-heads are small. The dorsal bundle of spicules is only feebly developed and projects only slightly above the head. Eight groups of spicules form an opercular cover.

Locality. Enoshima, Japan. Collected by Dr. Doederlein.

Spongodes flabellifera, n. sp.

The colony forms an upright stem, 73 millim. high, from which, at a height of 30 millim. and upwards, branches come off on all sides. These speedily ramifying form at the end small umbels, in which each terminal twig bears a bundle of from three to eight polyps; but here and there also single polyps occur. The lowermost branches are flat and their twigs are fused together; they thus form fan-shaped serrated folia, the margins of which are beset with rows of polyps. The ramification is loose, so that it can easily be made out everywhere. The polyp-heads are pedunculate, free from one another for a short space, and slightly surmounted by bundles of spicules. The heads are surrounded by eight groups of spicules arranged *en chevron*, which project like teeth above the margin.

	millim.
Height of the sterile stem	30
Diameter	16
Height of the polyp-bearing portion.....	43
Diameter	35

The colour of the polyp-umbels is dark fleshy red, the stem and branches are white.

Locality. Enoshima, Japan. Collected by Dr. Doederlein.

Spongodes Klunzingeri, n. sp.

Spongodes ramulosa, Klunzinger, Korallthiere des rothen Meeres, p. 37, pl. iii. fig. 2.

Non *Spongodes ramulosa*, Gray, Proc. Zool. Soc. 1862, pp. 28 and 29, figs. 5 and 6.

After a comparison of the typical specimen of *Spongodes ramulosa*, Klunzinger, which Professor von Martens most kindly lent me from the Berlin Museum, with specimens of Gray's species, it became evident that the two are specifically distinct. Hence the name *S. Klunzingeri* might be adopted for the species from the Red Sea described by Klunzinger.

X.—*Polyzoa of Mauritius.* By R. KIRKPATRICK,
Assistant in the British Museum (Natural History).

[Plates VII.—X.]

I HAVE great pleasure in taking this opportunity of thanking the Rev. Thomas Hincks, F.R.S., for his kindness in reading my manuscript and offering many valuable suggestions.